



ARSET

Applied Remote Sensing Training

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Sesión tres: Cómo acceder a datos de “Soil Moisture Active Passive” (SMAP)

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SMAP- Opciones de acceso a datos

Busqueda de datos, documentación y acceso: NSIDC

NSIDC National Snow & Ice Data Center

Scientific Data Search

spl3smp

From yyyy-mm-dd to yyyy-mm-dd

Showing 1-25 of 41 Data Sets

Sort by: Relevance (highest to lowest) Per page: 25

SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture

Temporal Coverage: 2015-03-31 to continuous

Parameter: Brightness Temperature | Soil Moisture

Data Format: HDF5

Summary: This Level-3 (L3) soil moisture product provides a composite of daily estimates of global land surface conditions retrieved by the Soil Moisture Active Passive (SMAP) passive...

SMAP L2 Radiometer Half-Orbit 36 km EASE-Grid Soil Moisture

<http://nsidc.org/data/search>

Visualización y descarga de datos: Worldview

NASA WORLDVIEW

Layers Events Data

OVERLAYS

Soil Moisture (L3, Passive)
SMAP / Radiometer

0.000 cm³/cm³ >= 0.600 cm³/cm³

Place Labels
OpenStreetMap (license), Natural Earth

Coastlines / Borders / Roads
OpenStreetMap (license), Natural Earth

Coastlines
OpenStreetMap (license)

BASE LAYERS

Corrected Reflectance (True Color)

<https://worldview.earthdata.nasa.gov>

Acceso a datos y personalización de productos: Earthdata Search

EARTHDATA

Data Discovery DAACs Community Science Disciplines

EARTHDATA Search

spl3smp

Temporal Spatial Clear Filters

Back to Collections

SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003

Retrieve Collection Data

Showing 20 of 497 matching granules

Sort by: Start Date, Newest first

Search Time: 0.3s Report a metadata problem

SMAP_L3_SM_P_20160815_R13080_001.h5

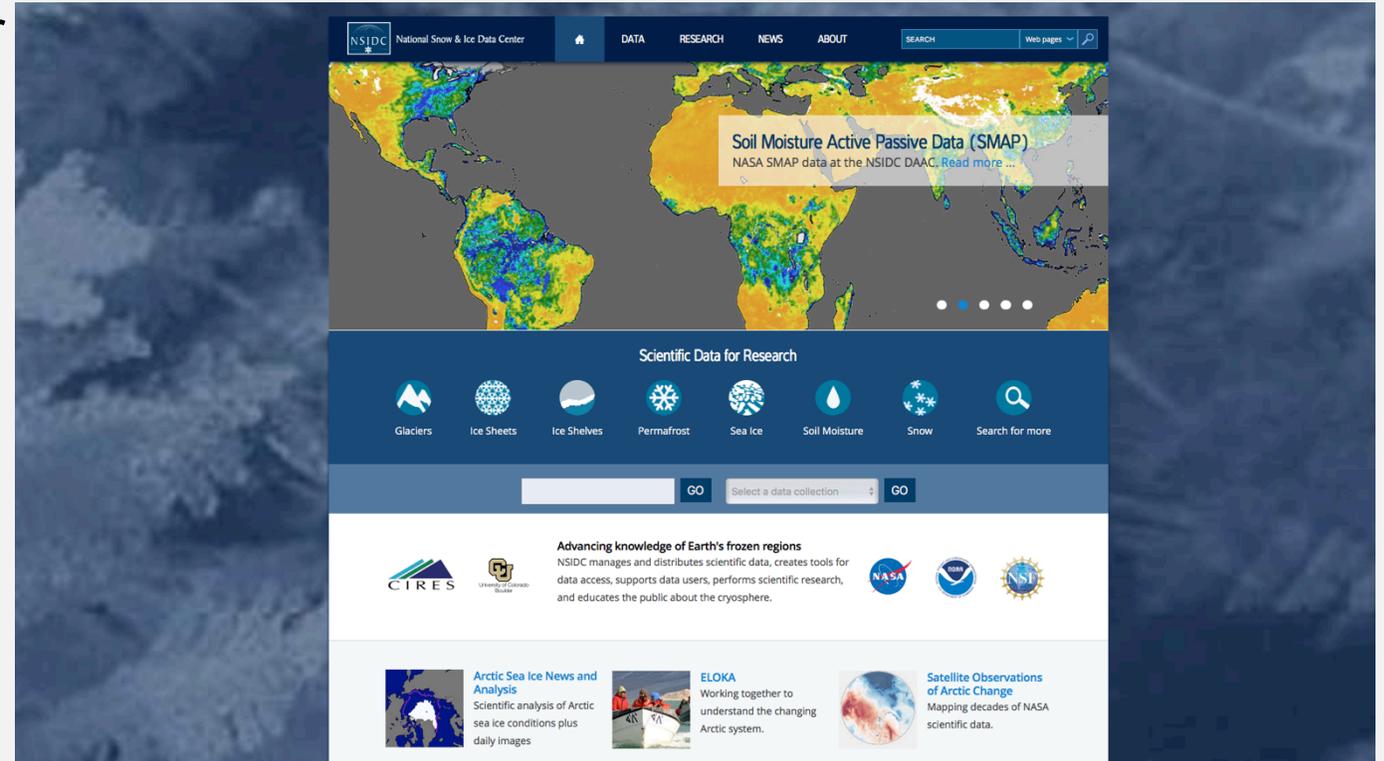
2016-08-15T00:00:00Z to 2016-08-15T23:59:59Z

<https://search.earthdata.nasa.gov>

Descubriendo datos de SMAP en el NSIDC

<http://nsidc.org/>

- NASA National Snow & Ice Data Center (NSIDC)* es un Distributed Active Archive Center (DAAC)**
- 1 de 12 DAACs del “Earth Observing System Data and Information System” (EOSDIS) de la NASA
- Distribuye casi 500 conjuntos de datos de la NASA
 - principalmente enfocados en la criósfera
- Después de la introducción, haremos un recorrido de la búsqueda de datos científicos “Scientific Data Search” del NSIDC



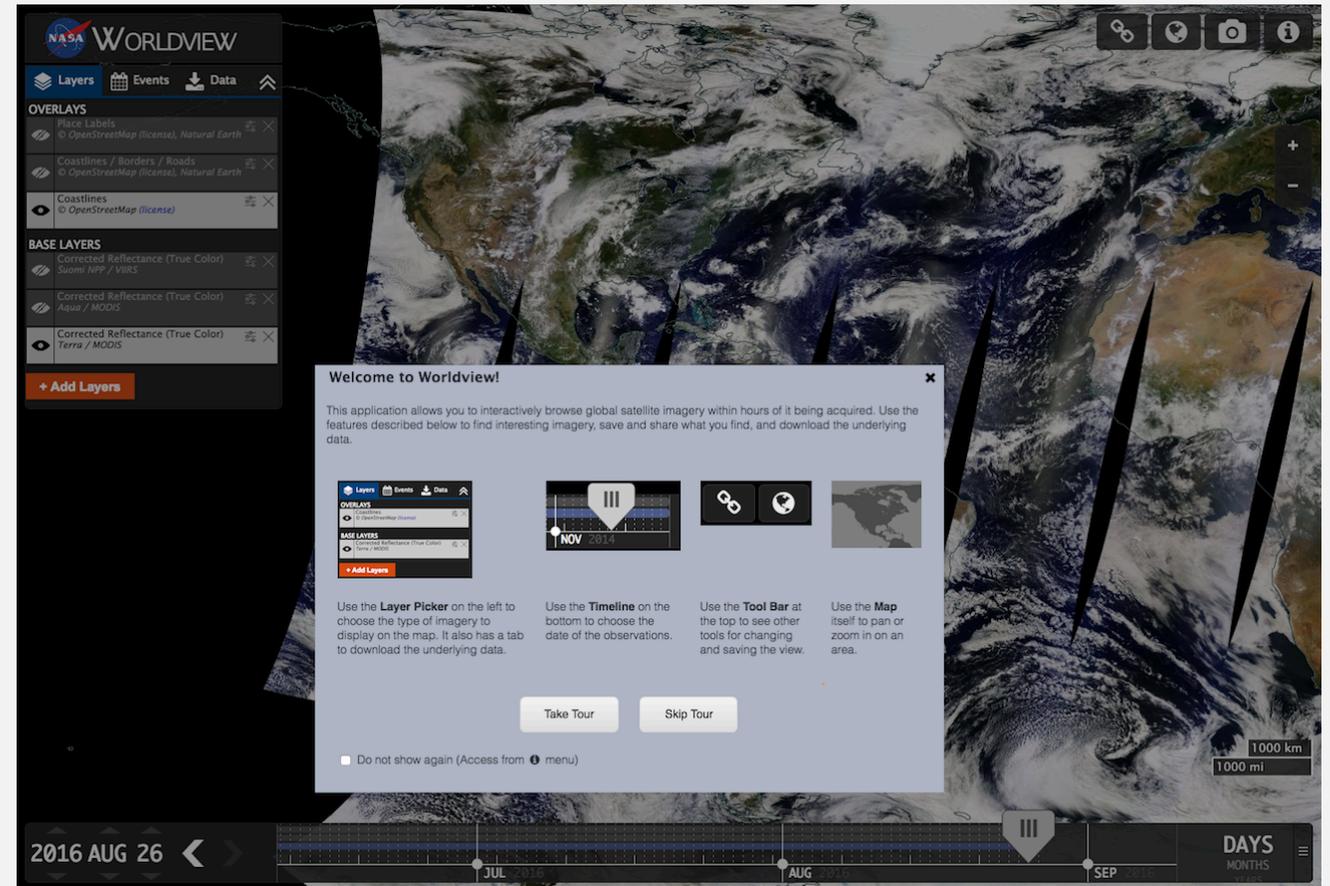
*Centro nacional de datos de la nieve y del hielo

**Centro activo de archivos distribuidos

Explorando datos de SMAP en Worldview de la NASA

<http://worldview.earthdata.nasa.gov/>

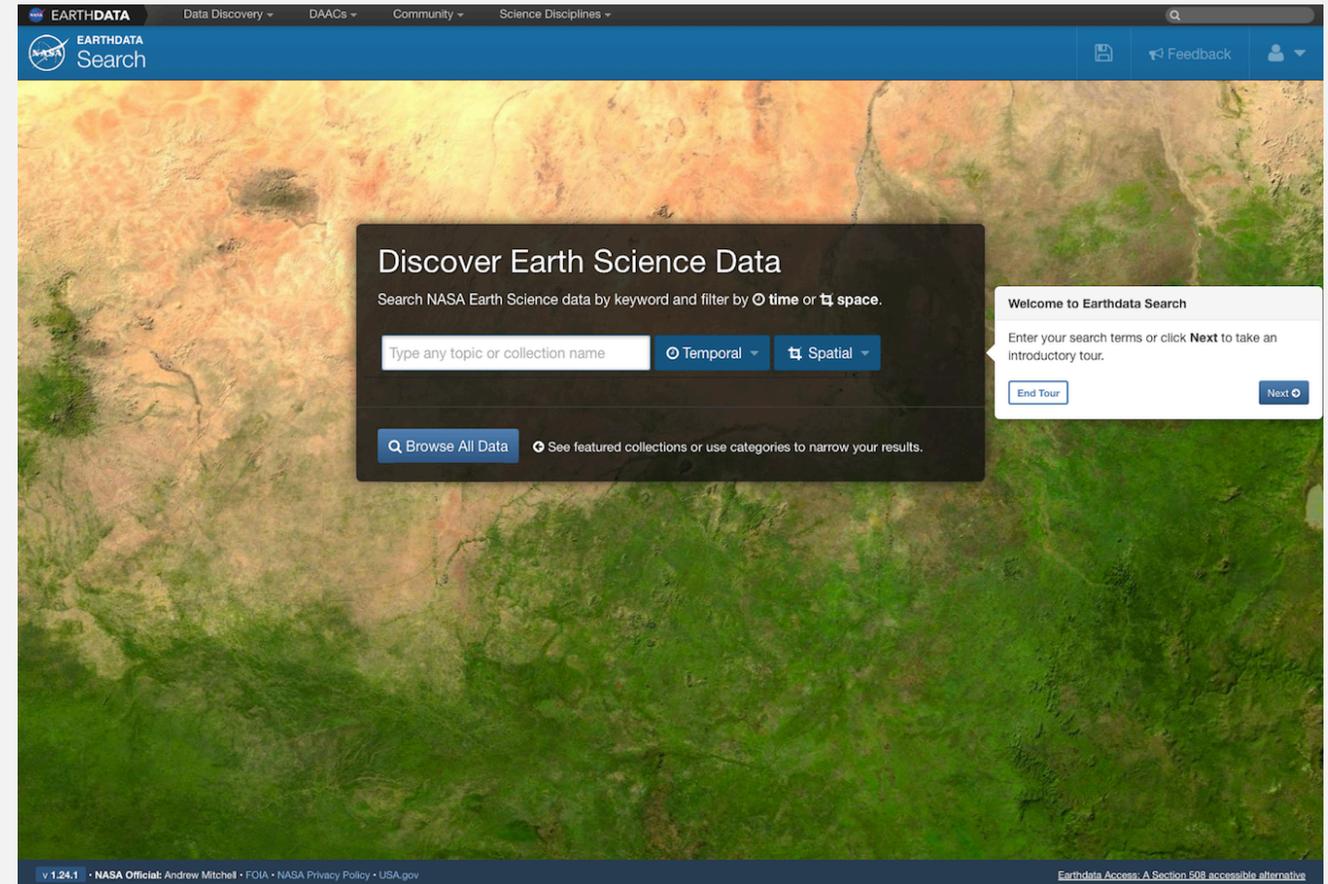
- Worldview ofrece la capacidad de revisar imágenes satelitales globales de resolución completa y de descargar los archivos de datos subyacentes e imágenes
- Usa “Global Imagery Browse Services” (GIBS)
- La mayoría de los 100+ productos disponibles están actualizados dentro de 3 horas de observación
- Después de la demostración de descubrimiento de y acceso a los datos de SMAP y el NSIDC, haremos un recorrido de Worldview



Acceso a datos de SMAP con el Earthdata Search de NASA

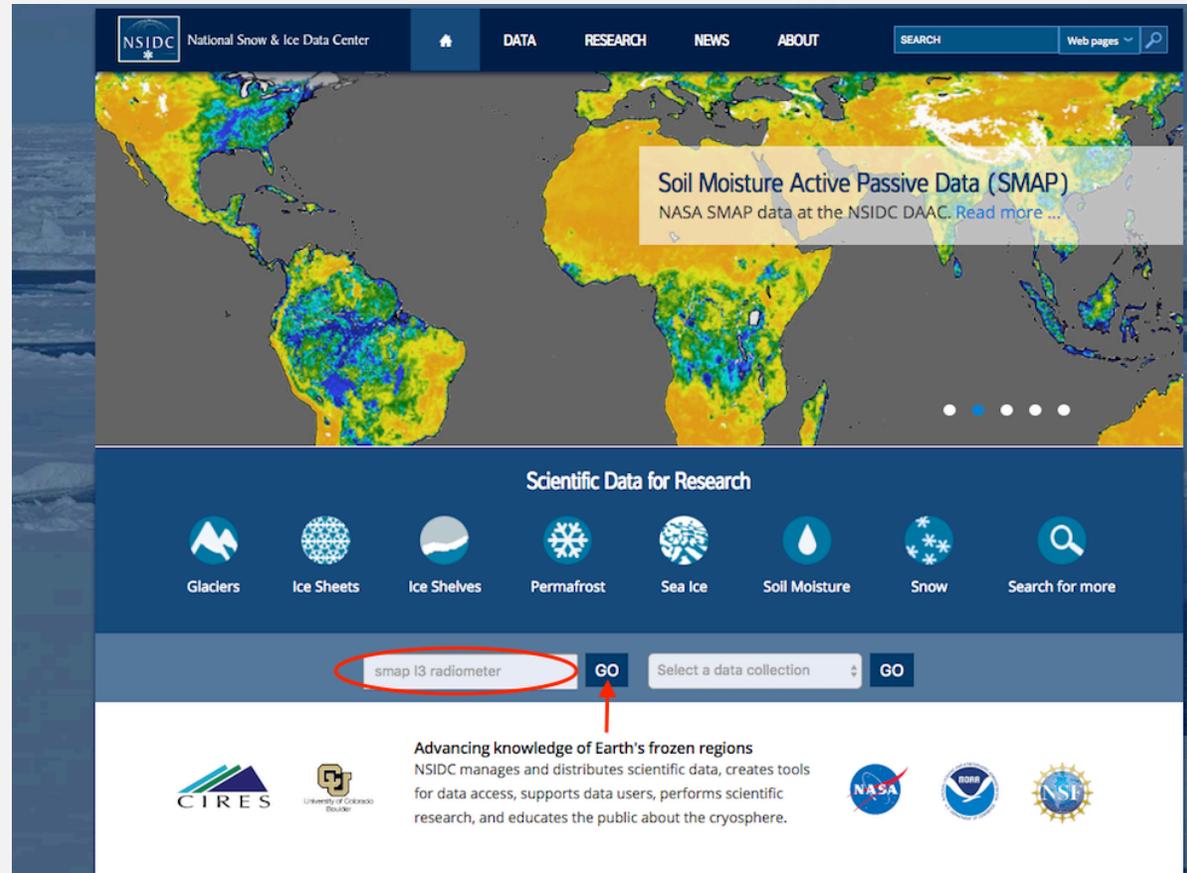
<http://search.earthdata.nasa.gov/search>

- Conecta a usuarios con sus datos al hacer disponible la búsqueda y descubrimiento de datos y el acceso a ellos en una sola aplicación
- Ofrece la habilidad de buscar entre varias disciplinas y diferentes DAACs
- Para la última demostración en vivo, repasaremos
 - las opciones de filtración de la interfaz para optimizar una búsqueda del “SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture” (SPL3SMP)
 - opciones para ordenar y formar subconjuntos de datos disponibles



Descubriendo los datos de SMAP en el NSIDC

<http://nsidc.org>



The screenshot shows the NSIDC (National Snow & Ice Data Center) website. At the top, there is a navigation bar with links for DATA, RESEARCH, NEWS, and ABOUT, along with a search bar. Below the navigation bar is a large map of the world displaying soil moisture data. A text box over the map reads "Soil Moisture Active Passive Data (SMAP) NASA SMAP data at the NSIDC DAAC. Read more ...". Below the map is a section titled "Scientific Data for Research" with icons for Glaciers, Ice Sheets, Ice Shelves, Permafrost, Sea Ice, Soil Moisture, and Snow, plus a "Search for more" button. At the bottom of this section is a search bar containing the text "smap l3 radiometer" (circled in red) and a "GO" button. Below the search bar is a footer with logos for CIRES, University of Colorado Boulder, NASA, NOAA, and NSIDC, and a paragraph of text: "Advancing knowledge of Earth's frozen regions NSIDC manages and distributes scientific data, creates tools for data access, supports data users, performs scientific research, and educates the public about the cryosphere."

Descubriendo los datos de SMAP en el NSIDC

<http://nsidc.org>

El pulsar en el nombre del conjunto de datos en los resultados de búsqueda le llevará a la página del catálogo de esa colección.

The screenshot shows the NSIDC website search results for the query 'smap l3 radiometer'. The page features a navigation bar with 'DATA', 'RESEARCH', 'NEWS', and 'ABOUT' tabs. A search bar at the top contains the query 'smap l3 radiometer'. Below the search bar, there are filters for 'Spatial Coverage' (Show Global Only), 'Temporal Duration' (< 1 year, 1+ years, 5+ years), 'Format' (HDF/HDF-EOS), and 'Sensor' (AMSR-E, AQUARIUS_RA..., SMAP L-Band R...). The search results are sorted by 'Relevance (highest to lowest)' and show 1-8 of 8 data sets. The first result is 'SMAP L3 Radar/Radiometer Global Daily 9 km EASE-Grid Soil Moisture', which is highlighted with a red arrow. A red arrow also points to the 'Get Data' button for this result. A second red arrow points to the 'Get Data' button for the second result, 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture', which has a dropdown menu open showing options like 'FTP', 'Reverb', 'Worldview', 'Subscription', 'HTTPS', and 'Earthdata Search'. The third result is 'AMSR-E/Aqua Daily L3 Surface Soil Moisture, Interpretive Parameters, & QC EASE-Grids', and the fourth is 'Aquarius L3 Gridded 1-Degree Weekly Soil Moisture'.

Descubriendo los datos de SMAP Data en el NSIDC

<http://nsidc.org>

Desde la página del catálogo, Ud. puede usar la opción de conseguir datos (Get Data) para descargar, visualizar y personalizar su orden de datos

También notará que hay un panorama de los datos en la colección. El pulsar en las diferentes pestañas resaltaré cómo citar estos datos, le proporcionará una guía para usuarios e informará cómo comunicarse con el NSIDC para ayuda

NSIDC National Snow & Ice Data Center

Data Set ID: SPL3SMP
SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture, Version 3

This Level-3 (L3) soil moisture product provides a composite of daily estimates of global land surface conditions retrieved by the Soil Moisture Active Passive (SMAP) passive microwave radiometer. SMAP L-band soil moisture data are resampled to a global, cylindrical 36 km Equal-Area Scalable Earth Grid, Version 2.0 (EASE-Grid 2.0).

Version Summary: [See more](#)

Print version

Overview | [Citing These Data](#) | [User Guide](#) | [Support](#)

Spatial Coverage:	N: 85.044, S: -85.044, E: 180, W: -180
Spatial Resolution:	36 km x 36 km
Temporal Coverage:	31 March 2015 to present
Temporal Resolution:	1 day
Parameter(s):	Microwave > Brightness Temperature Soils > Soil Moisture/Water Content > Soil Moisture
Platform(s):	SMAP Observatory
Sensor(s):	SMAP L-Band Radiometer
Data Format(s):	HDF5
Version:	V3
Data Contributor(s):	O'Neill, P. E., S. Chan, E. G. Njoku, T. Jackson, and R. Bindlish.
Metadata XML:	View Metadata Record

How to download data

DOWNLOADING DATA VIA FTP

Data can be downloaded through a Web browser or command line via FTP. When using a Web browser, the FTP link first directs you to an Optional Registration Form that if filled out, will allow you to receive notifications about updates or processing changes related to that specific data set. After completing the Optional Registration Form, the FTP directory becomes available. For additional help downloading data through an FTP client, go to User Services Online Support: [FTP Client Data Access Web page](#).

FTP

DOWNLOADING DATA VIA HTTPS

Downloading data via HTTPS requires registration with NASA Earthdata Login. Once you have registered and logged in, data can be downloaded via a Web browser, command line, or client. Your NASA Earthdata Login will work at other NASA Earth Observing System Data and Information System (EOSIS) Web sites, such as NASA Earthdata and NASA Reverb.

HTTPS

Get Data: Visualize

Worldview: This application allows you to interactively browse global satellite imagery within hours of it being acquired. You can also save it, share it, and download the underlying data.

Get Data: Package

Reverb: NASA search and order tool for subsetting, reprojecting, and reformatting data.

NOTE: Reverb will be decommissioned in the coming months and replaced with Earthdata Search. All links to Reverb will be removed at that time.

Subscription Service: Subscribe to have new data automatically sent when the data become available.

Earthdata Search: NASA's newest search and order tool for subsetting, reprojecting, and reformatting data.

Descubriendo los datos de SMAP en el NSIDC

<http://nsidc.org>

The screenshot shows the NSIDC website interface for the SMAP L3 Radiometer data. The main content area features a title, a description of the data set, and a 'Citing These Data' tab highlighted with a red arrow. Below this tab is a 'Data Citation' section with the following text:

Data Citation

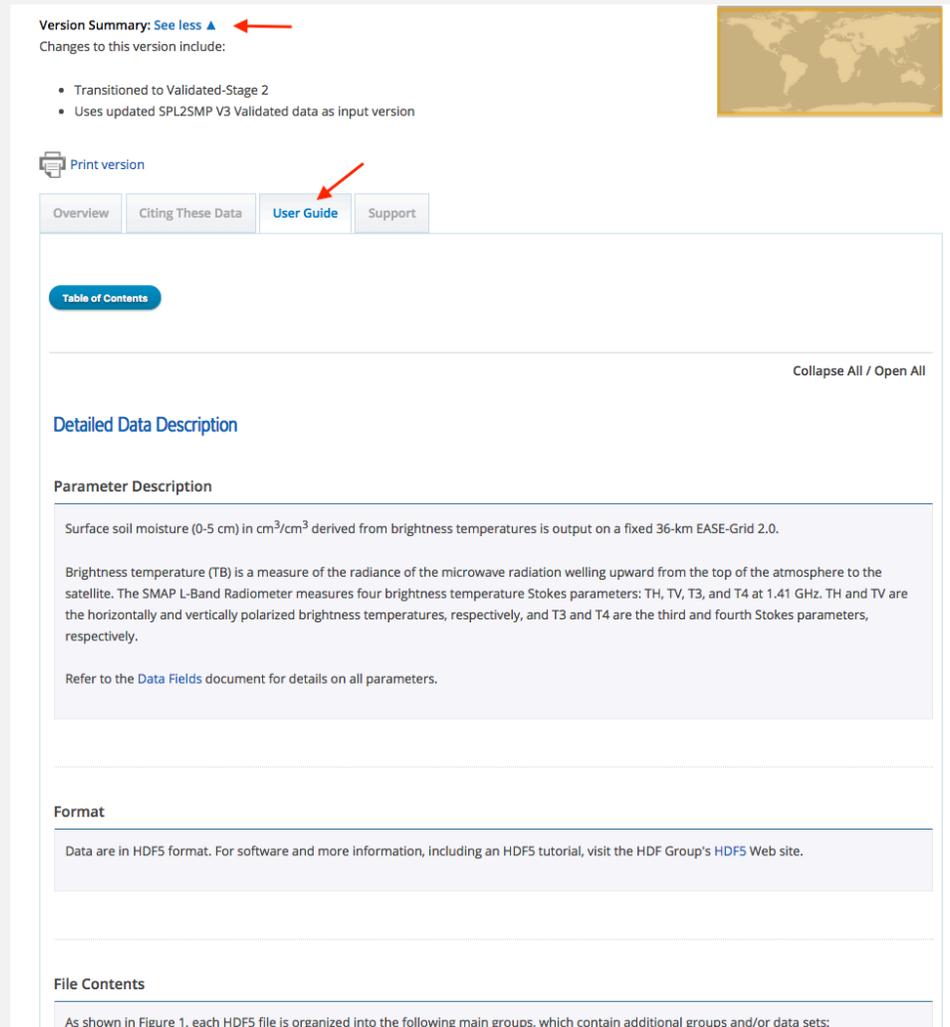
As a condition of using these data, you must cite the use of this data set using the following citation. For more information, see our [Use and Copyright](#) Web page.

O'Neill, P. E., S. Chan, E. G. Njoku, T. Jackson, and R. Bindlish. 2016. *SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture, Version 3*. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. doi: <http://dx.doi.org/10.5067/7MINGFDCZTES>. [Date Accessed].

The footer of the page contains navigation links for 'Find Data', 'Stay Current', 'Learn About Snow and Ice', and 'Get Help', along with logos for NSIDC, NASA, and the University of Colorado Boulder.

Descubriendo los datos de SMAP en el NSIDC

<http://nsidc.org>



Version Summary: [See less](#) ▲

Changes to this version include:

- Transitioned to Validated-Stage 2
- Uses updated SPL25MP V3 Validated data as input version



 Print version

Overview Citing These Data **User Guide** Support

[Table of Contents](#)

[Collapse All / Open All](#)

Detailed Data Description

Parameter Description

Surface soil moisture (0-5 cm) in cm^3/cm^3 derived from brightness temperatures is output on a fixed 36-km EASE-Grid 2.0.

Brightness temperature (TB) is a measure of the radiance of the microwave radiation welling upward from the top of the atmosphere to the satellite. The SMAP L-Band Radiometer measures four brightness temperature Stokes parameters: TH, TV, T3, and T4 at 1.41 GHz. TH and TV are the horizontally and vertically polarized brightness temperatures, respectively, and T3 and T4 are the third and fourth Stokes parameters, respectively.

Refer to the [Data Fields](#) document for details on all parameters.

Format

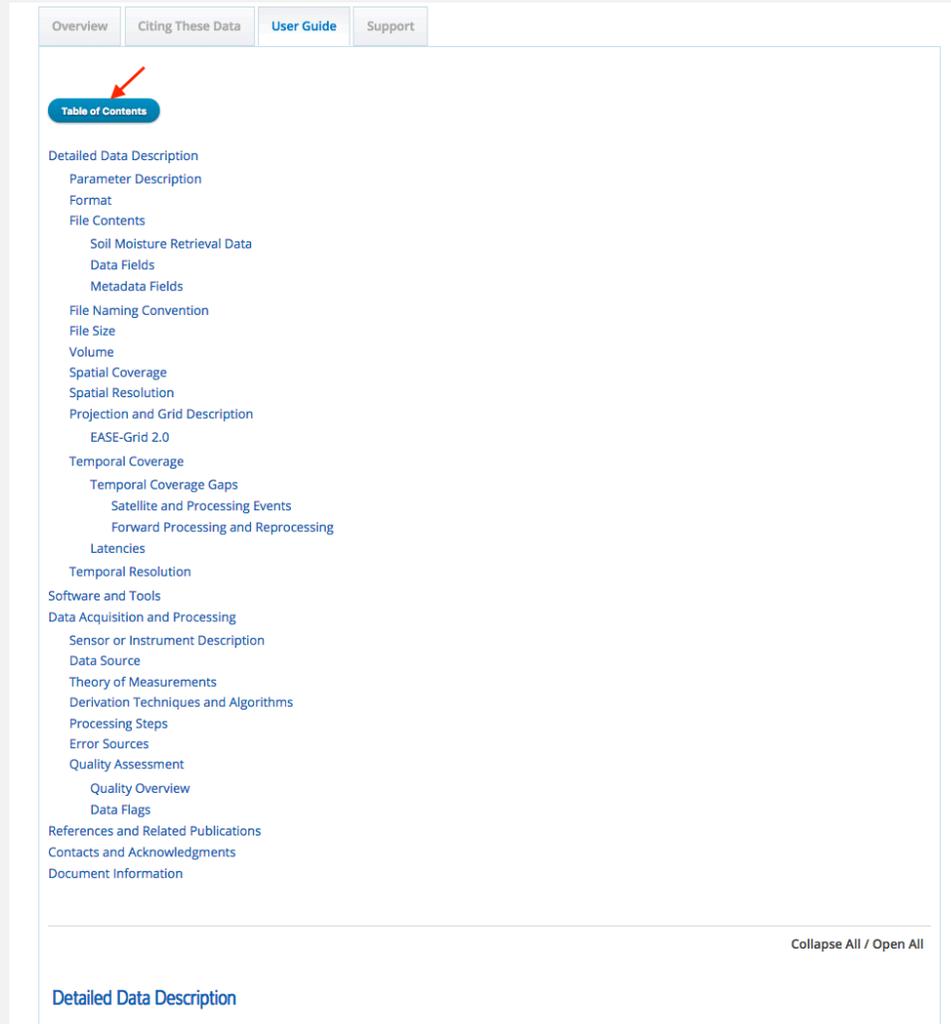
Data are in HDF5 format. For software and more information, including an HDF5 tutorial, visit the HDF Group's [HDF5](#) Web site.

File Contents

As shown in Figure 1, each HDF5 file is organized into the following main groups, which contain additional groups and/or data sets:

Descubriendo los datos de SMAP en el NSIDC

<http://nsidc.org>



The screenshot shows the NSIDC User Guide interface. At the top, there are four tabs: 'Overview', 'Citing These Data', 'User Guide' (which is active), and 'Support'. Below the tabs, there is a 'Table of Contents' button highlighted with a red arrow. The main content area lists various sections of the guide, including 'Detailed Data Description', 'Parameter Description', 'Format', 'File Contents', 'File Naming Convention', 'File Size', 'Volume', 'Spatial Coverage', 'Spatial Resolution', 'Projection and Grid Description', 'Temporal Coverage', 'Software and Tools', 'Data Acquisition and Processing', 'References and Related Publications', 'Contacts and Acknowledgments', and 'Document Information'. At the bottom right of the content area, there is a link that says 'Collapse All / Open All'. Below the content area, the text 'Detailed Data Description' is visible.

Descubriendo los datos de SMAP en el NSIDC

<http://nsidc.org>

The screenshot shows the NSIDC website interface. At the top, there is a navigation menu with 'DATA', 'RESEARCH', 'NEWS', and 'ABOUT' tabs. A search bar is located on the right side of the header. The main content area displays the title 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture, Version 3' and a brief description of the data set. Below the description, there is a 'Version Summary' section with a 'See more' link. A 'Print version' icon is also present. A navigation bar below the main content includes 'Overview', 'Citing These Data', 'User Guide', and 'Support' (highlighted with a red arrow). A 'Get Data' section on the right contains 'Download', 'Visualize', and 'Package' buttons. Below this is a 'Geographic Coverage' section with a world map. At the bottom of the page, there is a footer with contact information and a grid of links for 'Find Data', 'Stay Current', 'Learn About Snow and Ice', and 'Get Help'. The footer also includes logos for NSIDC, World Data System, CIRES, and the University of Colorado Boulder.

Herramientas que trabajan con datos de SMAP de formato HDF5

<http://nsidc.org/data/smap/tools>

El formato nativo de los archivos de datos de SMAP es el HDF5. El NSIDC ofrece una página de herramientas con un par de herramientas para la fácil visualización de los archivos HDF5: HDFView y Panoply.

Para la colección SPL3SMP, las opciones de Earthdata Search permiten el reformateo de los archivos como:

GeoTIFF, ASCII, NetCDF-3, NetCDF4-CF, KML y HDF-EOS5

Para una tabla detallada de los servicios de formación de subconjuntos, reformateo y reproyección disponibles para colecciones de MAP, por favor vea::

<https://support.nsidc.org/entries/97456598-What-data-subsetting-reformatting-and-reprojection-services-are-available-for-SMAP-data->

NASA Distributed Active Archive Center (DAAC) at NSIDC
SMAP Data
Soil Moisture Active Passive Data

Overview
Data Sets
SMAP Data
Validation Data
Data Versions
Tools
FAQs
How Tos
Data Announcements
Published Research
SMAP Data
Validation Data
Technical References

Tools

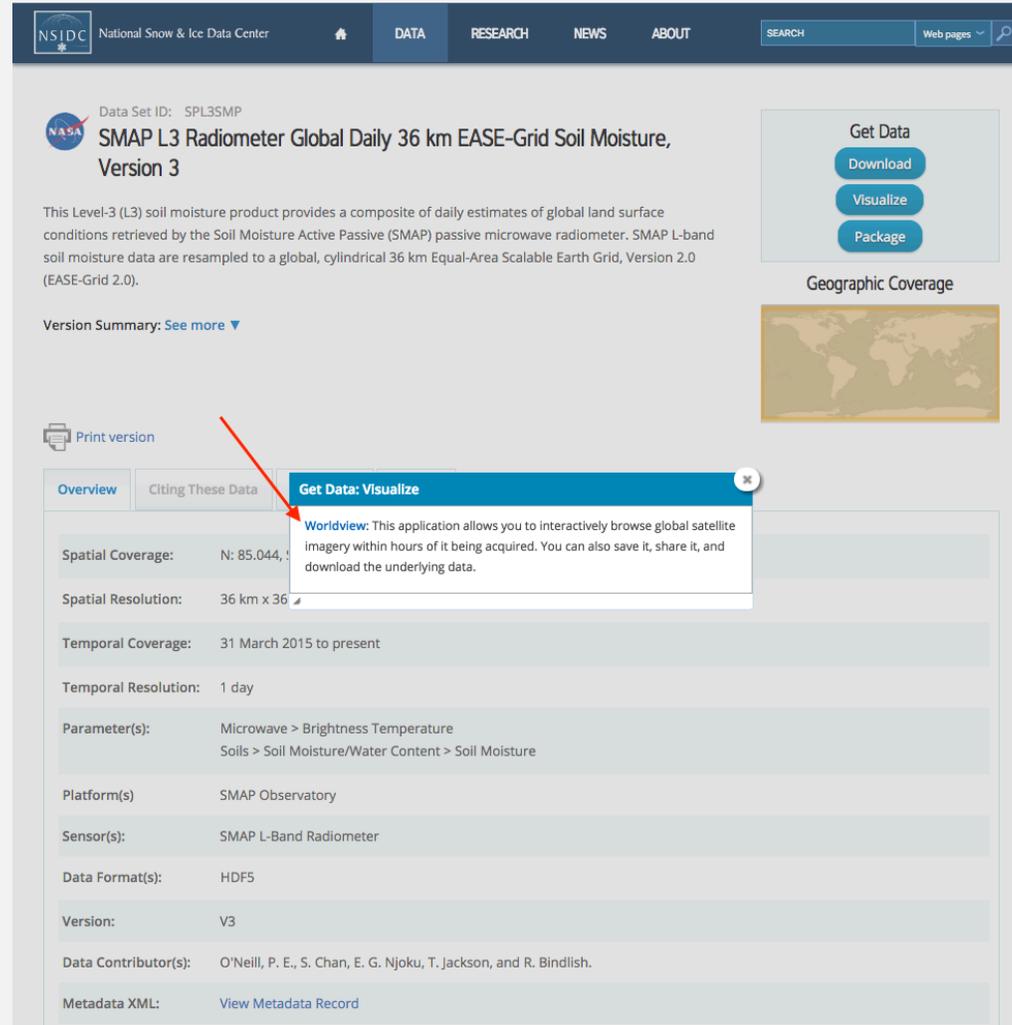
The following table lists the tools that work with SMAP HDF5-formatted data.

Tool	Description
HDFView	Visual tool for browsing and editing HDF4 and HDF5 files.
HDF-EOS Tools and Information Center	Provides example code for accessing and visualizing SMAP data in MATLAB, Python, IDL, and NCL.
Worldview	NASA visualization tool for browsing full-resolution imagery and downloading the underlying data.
Earthdata Search	NASA's newest search and order tool for subsetting, reprojecting, and reformatting data.
Reverb ECHO	NASA search and order tool for subsetting, reprojecting, and reformatting data. Note that Reverb has been replaced by a newer tool—Earthdata Search—and will soon be decommissioned.
EASE-Grid Data Web Site	Provides tools and documentation for working with EASE-Grid data.
Panoply netCDF, HDF, and GRIB Data Viewer	Cross-platform application that plots geo-gridded arrays from netCDF, HDF, and GRIB data sets.
NASA LaRC Satellite Overpass Predictor	An interactive tool that allows users to estimate when the SMAP satellite has passed, or will pass, over an area of the Earth. Users specify latitude and longitude or select a location on the map for which to calculate a 5-day sequence of satellite overpasses. All overpasses are returned for which the specified location falls within the 1000 km SMAP swath centered on the nadir track. Note: Predictions beyond 15 days should not be used as they become increasingly less accurate as a function of time. In general, predictions of up to five days provide a safe margin. ABOUT THE ORBIT OVERPASS PREDICTOR ALGORITHM The prediction algorithm models the orbit based on the known position information from the latest two-line orbital elements (TLE) records obtained from the North American Aerospace Defense Command (NORAD). The TLE records contain the position sensed during the radar scan. Normally two records are created per day, but sometimes up to three are created. The model is factoring the earth's bulge and also the weight of the continents as there are more above the equator than below. The model does not factor for the positions of continents relative to the satellite nor air resistance due to the rotational motion of the satellite in the atmosphere.
SMAP Overflights Tool	Tool that allows users to compute a <i>simulated</i> 8-day sequence of satellite overpasses at a user's point location (latitude and longitude). All overpasses are listed for which the point location falls within the 1000 km SMAP swath centered on the nadir track. For orbit characteristics, visit the JPL SMAP Specifications Web page.

Descubriendo los datos de SMAP en el NSIDC

<http://nsidc.org>

Revisitemos el botón “Visualize”,
pulsemos en
Worldview y
exploremos lo que
esta aplicación tiene
que ofrecer.



The screenshot shows the NSIDC website interface for the SMAP L3 Radiometer data. The page title is "SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture, Version 3". The "Get Data" section contains buttons for "Download", "Visualize", and "Package". A red arrow points to the "Visualize" button, which has opened a tooltip titled "Get Data: Visualize". The tooltip text reads: "Worldview: This application allows you to interactively browse global satellite imagery within hours of it being acquired. You can also save it, share it, and download the underlying data." Below the tooltip is a table of metadata for the data set.

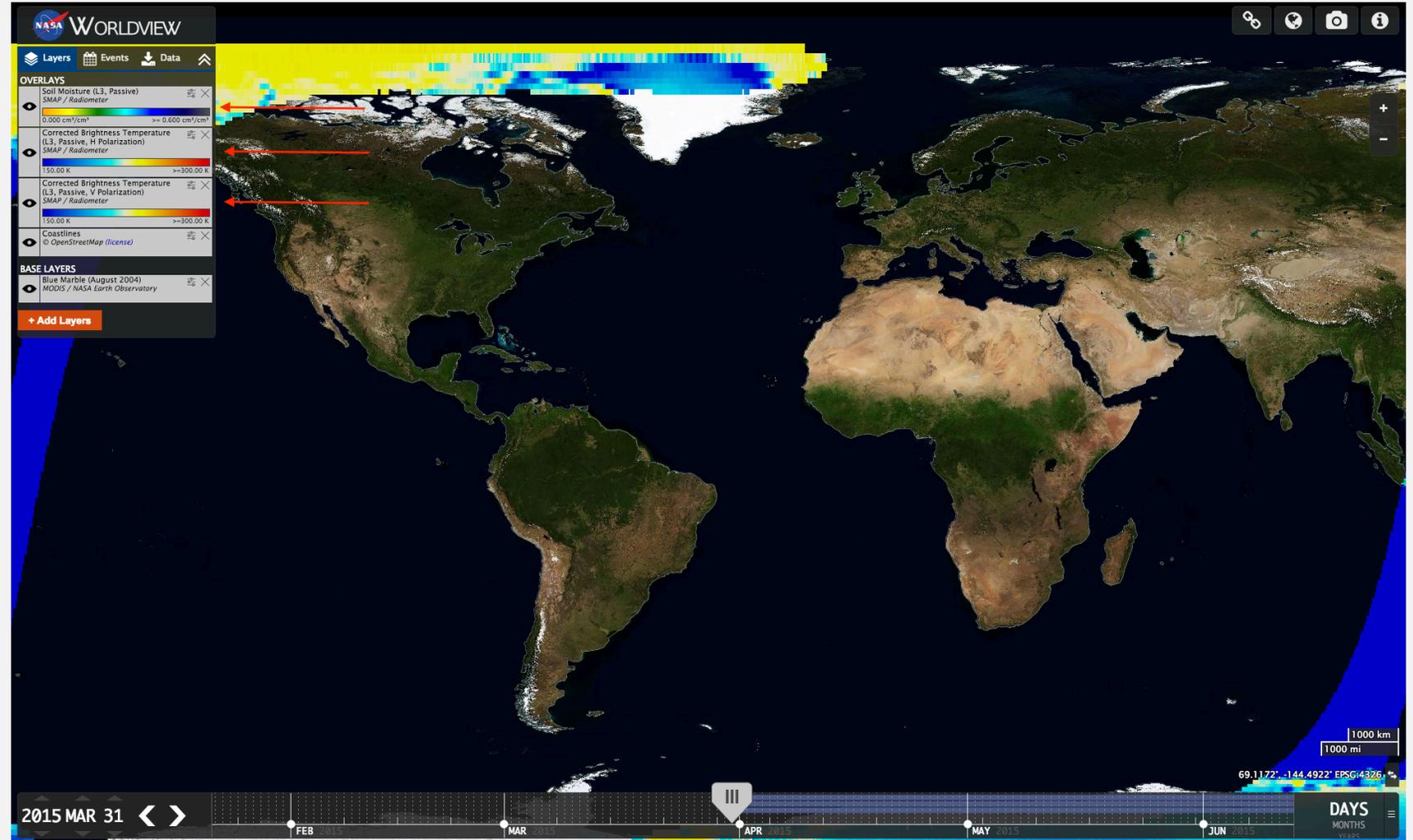
Field	Value
Spatial Coverage:	N: 85,044, S: 85,044, E: 180, W: -180
Spatial Resolution:	36 km x 36 km
Temporal Coverage:	31 March 2015 to present
Temporal Resolution:	1 day
Parameter(s):	Microwave > Brightness Temperature Soils > Soil Moisture/Water Content > Soil Moisture
Platform(s):	SMAP Observatory
Sensor(s):	SMAP L-Band Radiometer
Data Format(s):	HDF5
Version:	V3
Data Contributor(s):	O'Neill, P. E., S. Chan, E. G. Njoku, T. Jackson, and R. Bindlish.
Metadata XML:	View Metadata Record

Para visualizar y acceder a datos de SMAP desde Worldview

Al iniciar Worldview desde del producto SPL3SMP en el NSIDC, notará que algunos de los parámetros del conjunto de datos están incluidos en la sección “Overlays” automáticamente.

Los niveles pueden ser reacomodados arrastrándolos para cambiar el orden de presentación

- El nivel en el primer lugar de la lista se dibuja encima de los niveles inferiores

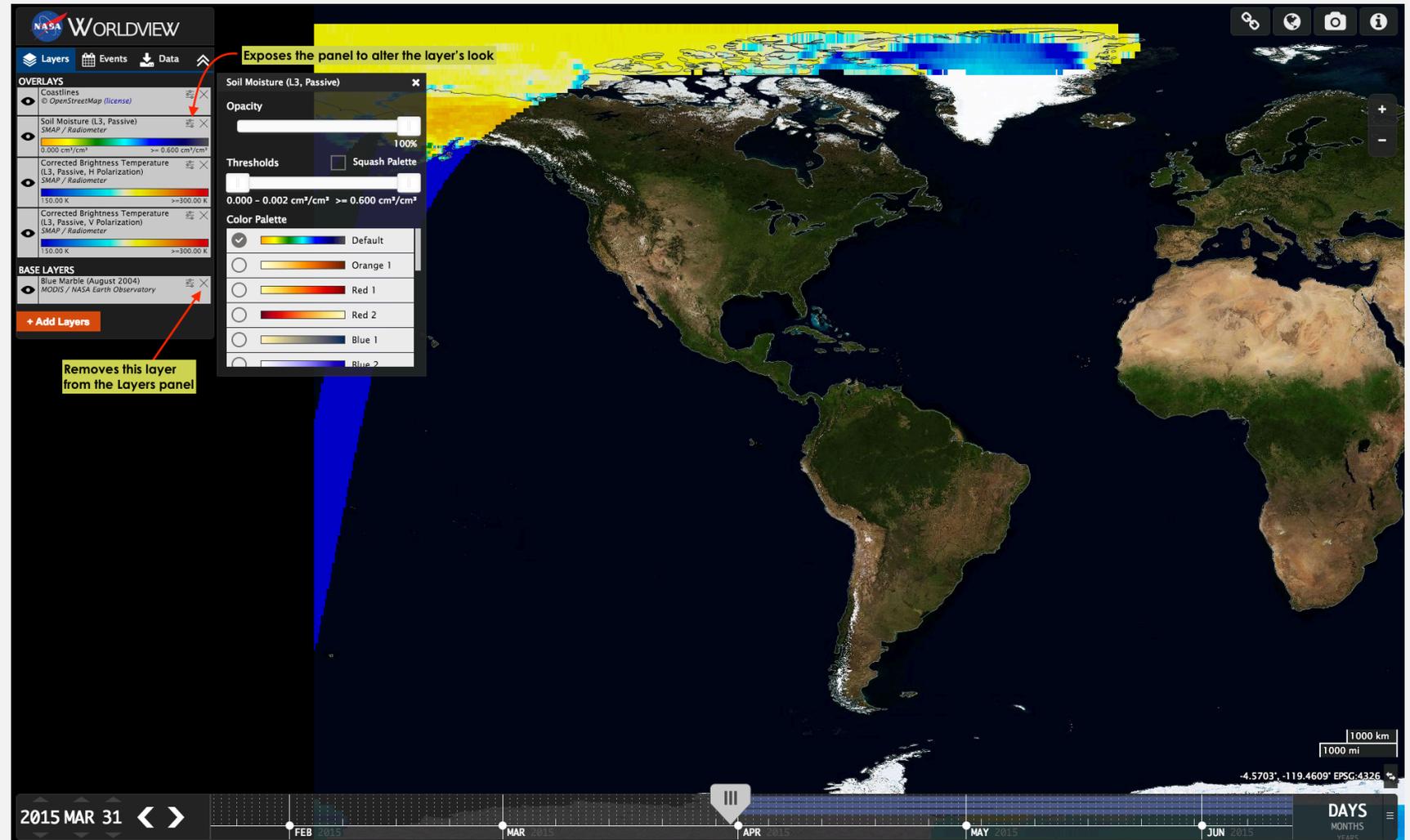


Para visualizar y acceder a datos de SMAP desde Worldview

Aquí he reacomodado el nivel de perfiles costeros (Coastlines) encima del de humedad del suelo (Soil Moisture) – note los perfiles visibles en el ártico sobre los datos de la humedad del suelo.

También, el pulsar en el símbolo de barra deslizante abrirá un diálogo para cambiar la opacidad, el umbral y la paleta de colores del nivel.

El pulsar el símbolo de “X” para un nivel lo remueve del panel de niveles (Layers).

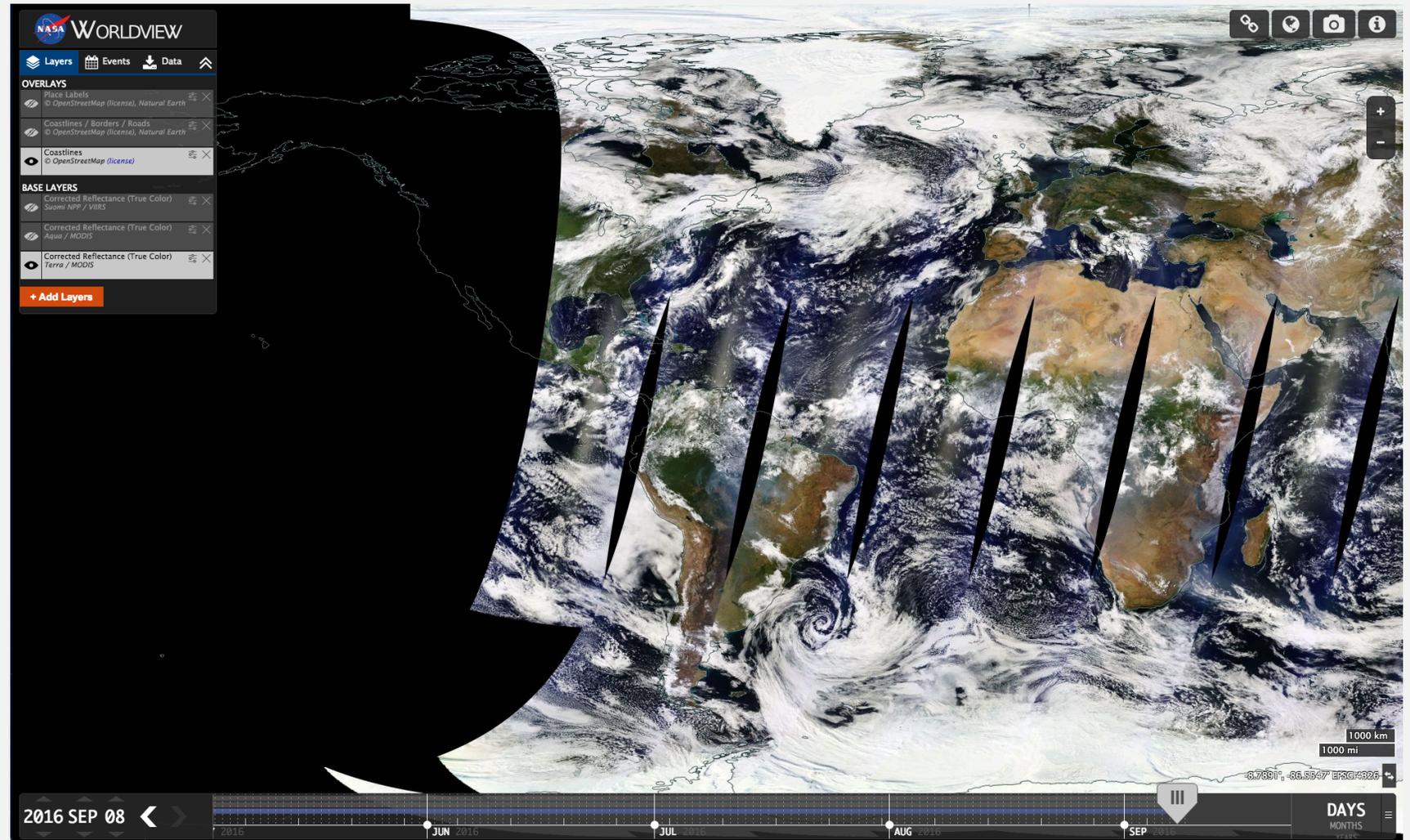


Para visualizar y acceder a datos de SMAP desde Worldview

<http://worldview.earthdata.nasa.gov>

Si Ud. ingresara al enlace que aparece aquí en su navegador, vería que las superposiciones (Overlays) y niveles de base (Base Layers) predeterminados son diferentes de lo que se abre en el enlace del NSIDC a Worldview de la página de productos de SMAP.

Volveremos a Worldview con SPL3SMP pre-cargado de la página de NSIDC y haremos un recorrido de la interfaz.



Explorando más allá con la interfaz de Worldview:

The image shows the NASA Worldview web application interface. The main map displays a global view with a color-coded overlay representing soil moisture. The interface includes a top navigation bar with 'Layers', 'Events', and 'Data' tabs. On the left, there is a 'Layers' pane with 'OVERLAYS' and 'BASE LAYERS' sections. At the bottom, there is a timeline for the year 2016, currently showing May 24. The interface is annotated with several callouts:

- Layers, Events, Data:** Tabs for displaying current layers, current world events or downloading underlying data.
- Layers Pane:** Collapse the layer pane and Turn overlay on or off.
- Top Right:** Copy a URL of this map to share, Change the projection of the display, and Take a snapshot of the interface.
- Information:** Information about Worldview.
- Map Interaction:** Zoom in or out - can also use your mouse's scroll wheel, double-click on the map, or shift+drag to zoom to an area.
- Layers Pane:** Click to browse through other layers to add.
- Timeline:** Change the month, day and year of the data displayed; Advance forward or back a day at a time; Blue line indicates the layer is on and available during this time range; Gray lines indicate the layers are off, but available during this time range; Slider control to change the date of the layer displayed; Collapse the timeline; Change the timeline's finest increment shown.

Explorando opciones de niveles:

Search ← Click and type here for a keyword search

Hazards And Disasters Science Disciplines

All

Aerosol Optical Depth
Areas of No Data (mask)
Blue Marble
Brightness Temperature
Carbon Monoxide
Chlorophyll a
...

Atmosphere

Aerosol Optical Depth
Carbon Monoxide
Cloud Effective Radius
Cloud Fraction
Cloud Multi Layer Flag
Cloud Optical Thickness
...

Biosphere

Fires and Thermal Anomalies
Soil Moisture
Forests, Mangrove

Cryosphere

Freeze / Thaw
Sea Ice
Sea Surface Temperature
Snow Cover
Snow Depth Over Ice
Snow Mass
...

Human Dimensions

Cyclone Hazard
Dams
Drought Hazard
Earth at Night 2012
Population Density
Power Plants, Nuclear
...

Land Surface

Blue Marble
Corrected Reflectance
Global Digital Elevation Map
Land Surface Reflectance
Land Surface Temperature
Fires and Thermal Anomalies

Oceans

Chlorophyll a
Sea Ice
Sea Surface Temperature
Snow Depth Over Ice
Wind Speed

Spectral/Engineering

Brightness Temperature
Sigma0
Faraday Rotation Angle

Terrestrial Hydrosphere

Flood Hazard
Freeze / Thaw
Sea Ice
Snow Cover
Snow Mass
Snow Water Equivalent
...

Other

Areas of No Data (mask)
Global 250m Water Map
Global Digital Elevation Map
Latitude-Longitude Lines
Orbital Track
Reference Map

Click this category to expand and reveal SMAP data

Clicking the Add Layers button opens this dialogue where you can search by topic on the "Hazards And Disasters" tab or under the "Science Disciplines" tab where we are now. SMAP can be found under the Terrestrial Hydrosphere category. You may also search by keywords at the top of this dialogue by clicking on the "Search" text.

2016 JUN 20

APR MAY JUN JUL AUG

DAYS MONTHS

Opciones de niveles de SMAP:

The screenshot displays the NASA WorldView interface with a search window open for 'Soil Moisture'. The search results list several options, with 'Soil Moisture (L3, Passive)' selected. A yellow callout box points to the 'Soil Moisture (L2, Passive, Single Channel Algorithm, H Polarization)' option with the text 'Click to reveal more details about the SMAP Radiometer collections'. The interface also shows a list of overlays and base layers on the left, and a timeline at the bottom.

OVERLAYS

- Soil Moisture (L3, Passive) SMAP / Radiometer
- Corrected Brightness Temperature (L3, Passive, H Polarization) SMAP / Radiometer
- Corrected Brightness Temperature (L3, Passive, V Polarization) SMAP / Radiometer
- Coastlines © OpenStreetMap (license)

BASE LAYERS

- Blue Marble (August 2004) MODIS / NASA Earth Observatory

Search Results:

- Flood Hazard SEDAC
- Freeze / Thaw Aqua / AMSR-E, SMAP / Radar, DMSP / SSM
- Sea Ice Aqua / MODIS, Aqua / AMSR-E, GCOM-W1 / AMSR2, Terra / MODIS
- Snow Cover Aqua/MODIS, Terra/MODIS
- Snow Mass SMAP / Model Value-Added
- Snow Water Equivalent GCOM-W1 / AMSR2
- Soil Moisture** SMAP / Radar, SMAP / Radiometer, SMAP / Model Value-Added
 - Soil Moisture (L2, Passive, Single Channel Algorithm, H-pol)
 - Soil Moisture (L2, Passive, Single Channel Algorithm, V-pol)
 - Soil Moisture (L2, Passive, Dual Channel Algorithm)
 - Soil Moisture (L3, Passive)

Orbital Tracks:

- Ascending/Night
- Descending/Day

Soil Moisture (L2, Passive, Single Channel Algorithm, H Polarization)
Temporal coverage: March 31, 2015 - present.

The Soil Moisture Active Passive (SMAP) "Soil Moisture (L2, Passive, Single Channel Algorithm, H Polarization)" layer displays surface soil moisture in cm^3/cm^3 derived from the Single Channel Algorithm H-Pol (SCA-H), one of four optional soil moisture algorithms, for the 6:00 a.m. descending half-orbit passes of the SMAP radiometer. The SMAP radiometer measures natural thermal emission emanating from the soil surface. The variation in the intensity of this radiation...

Click to reveal more details about the SMAP Radiometer collections

Agredando una superposición: Perfiles costeros/ fronteras/ caminos

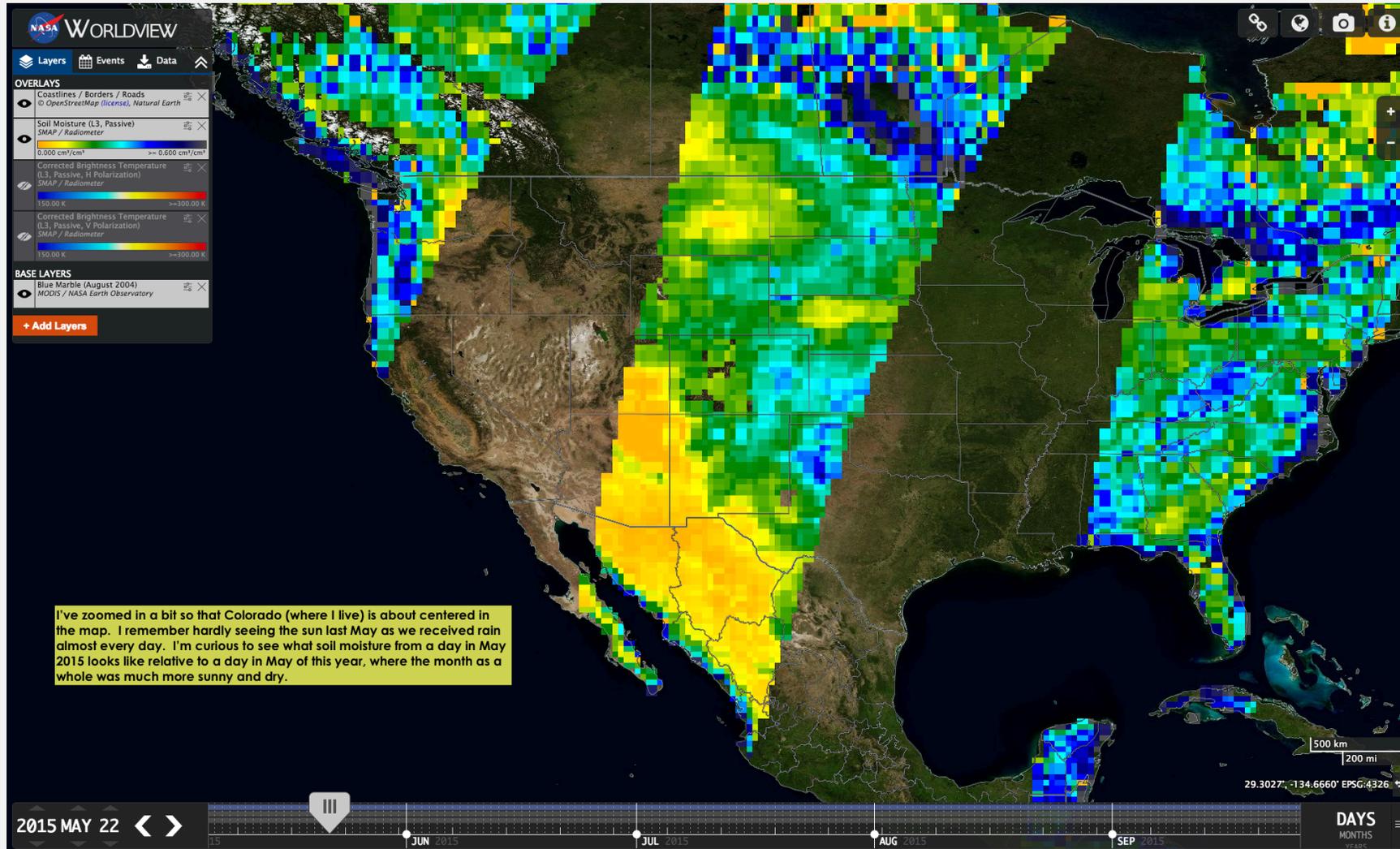
The screenshot displays the NASA WorldView interface. On the left, a 'Layers' panel is visible, divided into 'OVERLAYS' and 'BASE LAYERS'. The 'OVERLAYS' section includes 'Coastlines / Borders / Roads', 'Soil Moisture (L3, Passive)', and two 'Corrected Brightness Temperature' layers. The 'BASE LAYERS' section includes 'Blue Marble (August 2004)' and 'MODIS / NASA Earth Observatory'. A search menu is open in the center, showing a list of categories and layers. The 'Reference Map' section is expanded, showing 'OpenStreetMap.org' as the selected source. Underneath, several options are listed: 'Coastlines / Borders / Roads' (checked), 'Place Labels', 'Coastlines', 'Land Mask', and 'Land / Water Map'. A red arrow points to the 'Coastlines / Borders / Roads' option. Below the search menu, a yellow text box contains the following text: 'Here, I've clicked on the "Other" category from the "Science Disciplines" tab and changed the default "Coastlines" layer to be "Coastlines/Borders/Roads" to add more detail to the map.' The main map area shows a satellite view of Africa with various overlays. A scale bar at the bottom right indicates 1000 km and 1000 mi. The bottom of the interface shows a timeline for the year 2016, with the date 'JUN 20' selected.

2016 JUN 20 < >

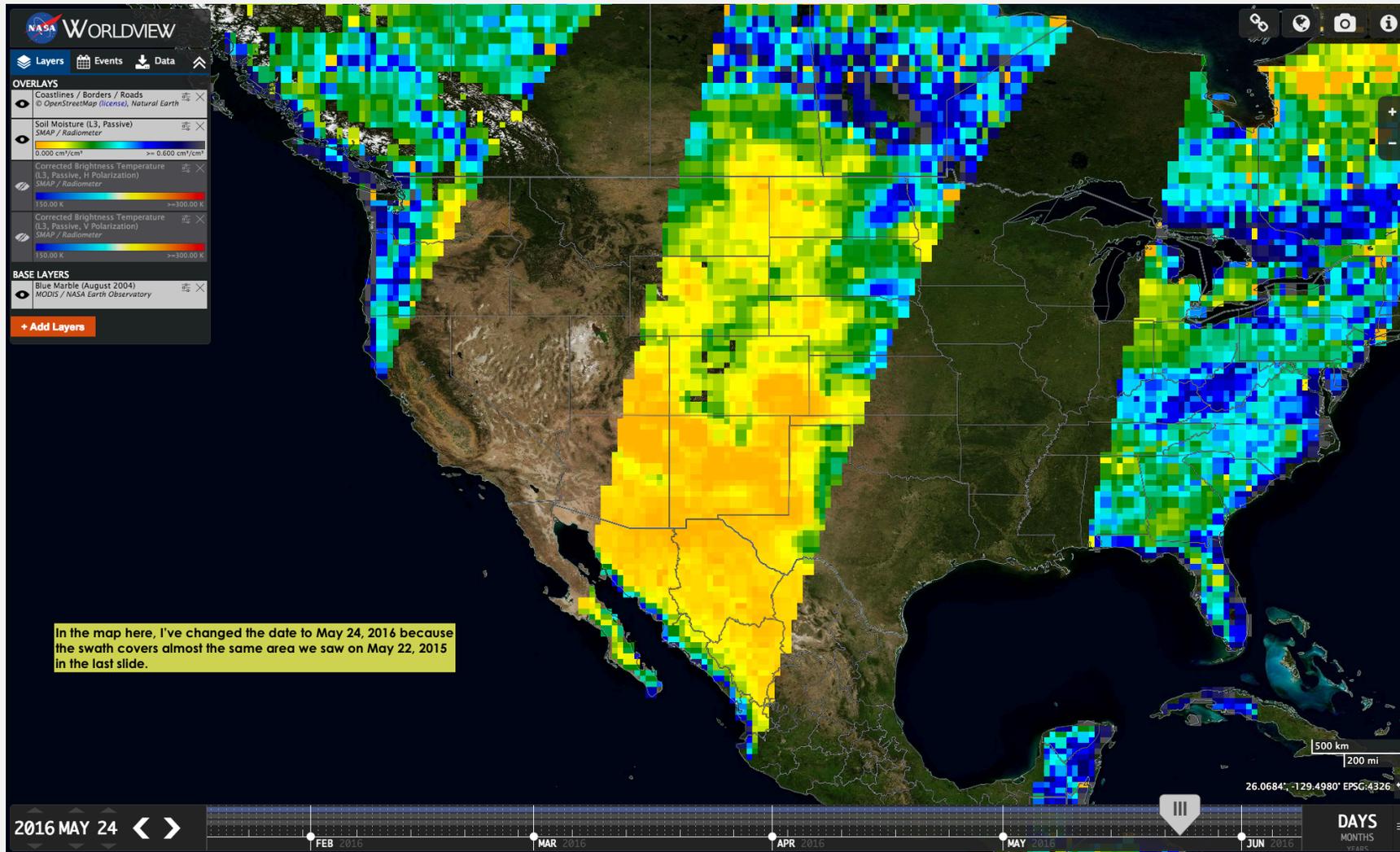
APR MAY JUN JUL AUG

DAYS MONTHS

Una comparación rápida de la humedad del suelo a través del tiempo...

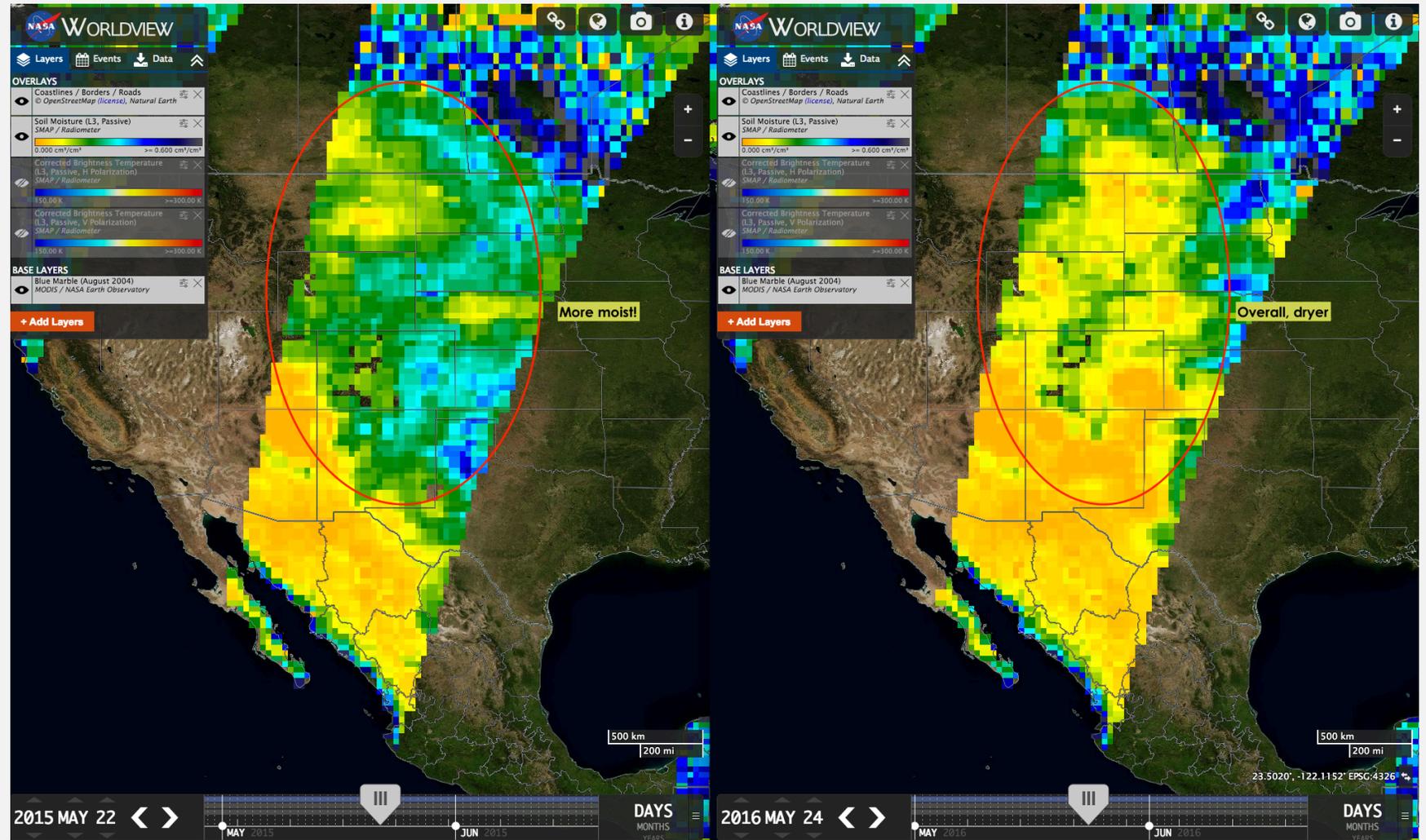


Una comparación rápida de la humedad del suelo a través del tiempo...



Una comparación rápida de la humedad del suelo a través del tiempo...

Puedo usar la opción “Share this Map” (compartir este mapa) para copiar enlaces para los dos días que me gustaría comparar y visualizarlos en ventanillas de navegadores una al lado de otra para una visualización rápida de las diferencias de la humedad del suelo entre esas dos fechas.



Descargando de Worldview:

The screenshot displays the NASA Worldview web application. The left sidebar contains the following elements:

- Layers:** SMAP L3 RADIOMETER GLOBAL DAILY 36 KM EASE-GRID SOIL MOISTURE (1 SELECTED)
- Events:** Soil Moisture (L3, Passive) SMAP / Radiometer
- Data:** NOT AVAILABLE FOR DOWNLOAD (?)
- Download Selected Data:** (button)

The main map area shows a color-coded overlay of soil moisture data over North America. A 'Select data' dialog box is open, showing a date selection for 2015-05-22: 00:00-23:59 UTC. A yellow callout box points to the date selection with the text: "Tick this box to select this day's data".

At the bottom of the interface, there is a timeline for date selection, currently showing 2015 MAY 22. The timeline includes buttons for navigation and a 'DAYS MONTHS YEARS' selector.

Descargando de Worldview:

NASA WORLDVIEW

Layers Events Data

SMAP L3 RADIOMETER GLOBAL DAILY 36 KM EASE-GRID SOIL MOISTURE **2 SELECTED**

Soil Moisture (L3, Passive)
SMAP / Radiometer

NOT AVAILABLE FOR DOWNLOAD (?)

Blue Marble (August 2004)
MODIS / NASA Earth Observatory

Coastlines / Borders / Roads
© OpenStreetMap (license), Natural Earth

Download Selected Data

Select data

2016-05-24: 00:00:23:59 UTC

Advance to the next day of Soil Moisture data and tick the box - notice that the Data panel indicates "2 SELECTED"

2016 MAY 24 < >

FEB 2016 MAR 2016 APR 2016 MAY 2016 JUN 2016

500 km 200 mi

42.9434° -131.5020° EPSG:4326

DAYS MONTHS YEARS

Descargando de Worldview:

The screenshot shows the NASA Worldview interface with a map of North America displaying soil moisture data. A 'Download Links' dialog box is open, showing selected data for two dates: 2015-05-22 and 2016-05-24. The dialog box includes a 'Bulk Download' section with instructions for using List of Links and List of cURL Commands. A yellow text box provides additional instructions on how to use the download options.

Click the "Download Selected Data" button and this dialogue pops up. Here you can remove files from your order and explore your download options.

Clicking on individual file names (in blue) in the top part of the box will download just that file to your machine. Depending on your browser, you may need to hover and right-click on the .qa and .xml files and choose the "Save link as" option to save them to your machine rather than have them just open in a separate window or tab.

Clicking in the bottom of the box on either "List of Links" or "List of cURL Commands" will open a new tab or window in your browser with instructions on how to use these options (see next slide).

Download Links

SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture

Selected Data

Date	Files
2015-05-22: 00:00-23:59 UTC	<ul style="list-style-type: none">SMAP_L3_SM_P_20150522_R13080_001.h5SMAP_L3_SM_P_20150522_R13080_001.qaSMAP_L3_SM_P_20150522_R13080_001.h5.iso.xml
2016-05-24: 00:00-23:59 UTC	<ul style="list-style-type: none">SMAP_L3_SM_P_20160524_R13080_001.h5SMAP_L3_SM_P_20160524_R13080_001.qaSMAP_L3_SM_P_20160524_R13080_001.h5.iso.xml

Bulk Download

- List of Links: for wget or download managers that accept a list of URLs
- List of cURL Commands: can be copied and pasted to a terminal window to download using cURL.

2016 MAY 24 < > APR 2016 MAY 2016 JUN 2016 JUL 2016 AUG 2016

DAYS MONTHS YEARS

Descargando de Worldview:

Download Links

```
ftp://n5eil01u.ecs.nsidc.org/DP4/SMAP/SPL3SMP.003/2015.05.22/SMAP_L3_SM_P_20150522_R13080_001.h5  
ftp://n5eil01u.ecs.nsidc.org/DP4/SMAP/SPL3SMP.003/2016.05.24/SMAP_L3_SM_P_20160524_R13080_001.h5
```

Using [wget](#) to Bulk Download Your Data

- 1) Copy the links above and paste into a text document. Save it as "links.txt"
- 2) Execute the following command to download all of your requested files:

```
wget --input-file=links.txt
```

Using [Free Download Manager](#) for Windows to Bulk Download Your Data

- 1) Copy the Download Links above to your clipboard
- 2) In Free Download Manager, go to File | Import | Import list of URLs from clipboard

Download Commands

```
curl --remote-name ftp://n5eil01u.ecs.nsidc.org/DP4/SMAP/SPL3SMP.003/2015.05.22/SMAP_L3_SM_P_20150522_R13080_001.h5  
curl --remote-name ftp://n5eil01u.ecs.nsidc.org/DP4/SMAP/SPL3SMP.003/2016.05.24/SMAP_L3_SM_P_20160524_R13080_001.h5
```

Using [curl](#) to Bulk Download Your Data

Mac OS X / Linux

- 1) Copy the Download Commands above and paste into a text document. Save it as "download.sh"
- 2) Execute the following command to download all of your requested files:

```
sh ./download.sh
```

Windows

- 1) Copy the Download Commands above and paste into a text document. Save it as "download.bat"
- 2) Execute the following command to download all of your requested files:

```
download.bat
```

Búsqueda de y acceso a datos de SMAP desde Earthdata Search

Al iniciar la búsqueda Earthdata Search de la página de productos de SPL3SMP en el NSIDC, Ud. verá que la interfaz está pre-poblada con el nombre corto del conjunto de datos y que la colección aparece en la ventanilla Collection.

The screenshot shows the Earthdata Search interface. At the top, there is a search bar containing 'SPL3SMP' and filters for 'Temporal' and 'Spatial'. Below the search bar, a sidebar on the left lists various categories: Features, Map Imagery, Near Real Time, Subsetting Services, Keywords, Biosphere, Climate Indicators, Cryosphere, Land Surface, Spectral/Engineering, Terrestrial Hydrosphere, Platforms, Instruments, and Organizations. The main content area displays '1 Matching Collections' and a collection card for 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003'. The card includes the text 'No image available' and '2015-03-31 ongoing | 520 Granules'. A 'Get Data: Package' button is visible on the card. A red arrow points to the 'Earthdata Search' link in the 'Get Data: Package' section. The bottom of the interface shows the footer with 'v 1.26.3' and 'NASA Official: Andrew Mitchell'.

Explorando la interfaz de Earthdata Search:

The screenshot displays the Earthdata Search web application interface. The top navigation bar includes the Earthdata Search logo, a search input field containing 'SPL3SMP', and buttons for 'Temporal', 'Spatial', and 'Clear Filters'. On the right side of the top bar are links for 'Feedback' and 'Earthdata Login'. The left sidebar contains a 'Browse Collections' section with a faceted filter pane and a 'Collections pane' showing search results. The main content area displays a map of the world with a search result card for 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003'. The map includes a toolbar with various interaction tools. Numerous yellow callout boxes with red arrows point to specific UI elements, providing instructions on how to use them.

Keyword search and filter options

Click to submit help request or feedback

Click to login to Earthdata

Display temporal and spatial filters once set

Display the map's base layer options

Zoom in, out or to a "home" extents (spatial search area if present, original extents if no spatial search defined). You can also zoom using your mouse: scroll wheel will zoom in and out, double click will zoom in on a point, shift+click+cursor drag will zoom to an area.

Change projection to North Polar Stereographic, WGS84, or South Polar Stereographic

Spatial filter buttons - search by point, rectangle or polygon

Edit or delete spatial filter bounds

Add this collection to a project

Faceted filter pane

Collections pane

Earthdata Search SPL3SMP **Temporal** **Spatial** **Clear Filters** **Feedback** **Earthdata Login**

1 Matching Collections

Add collections to your project to compare and retrieve their data. **Learn More**

Search Time: 0.7s **Report a metadata problem**

SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003

SPL3SMP v003 - NSIDC

2015-03-31 ongoing | 520 Granules

Map Imagery

Near Real Time **NRT**

Subsetting Services

Keywords

Biosphere 1

Climate Indicators 1

Cryosphere 1

Land Surface 1

Spectral/Engineering 1

Terrestrial Hydrosphere 1

Platforms

Instruments

Organizations

1000 km

500 mi

v 1.26.3 **NASA Official** Andrew Mitchell • FOIA • NASA Privacy Policy • USA.gov

Earthdata Access: A Section 508 accessible alternative

Explorando la interfaz de Earthdata Search– después de ingresar:

Si aún no tiene un nombre de usuario de an Earthdata, deberá registrarse para obtener uno antes de poder ordenar datos.

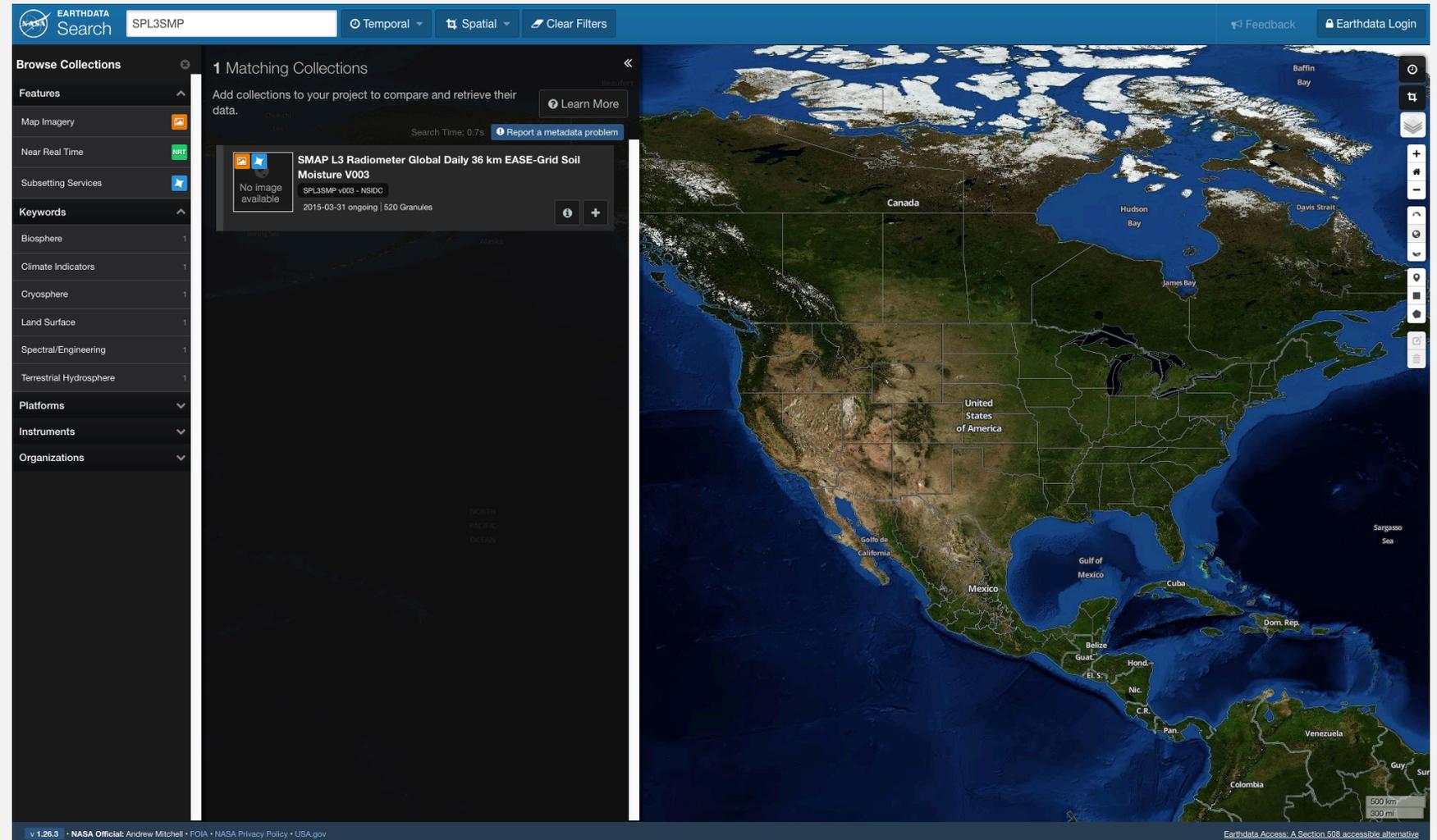
Una vez que haya ingresado, verá que la interfaz se ve un poco diferente. Ahora Ud. puede guardar proyectos, visualizar otros proyectos guardados anteriormente y revisar su historial de órdenes.

The screenshot displays the Earthdata Search interface. At the top, the search bar contains 'SPL3SMP' and filters for 'Temporal' and 'Spatial' are visible. A blue button in the top right corner says 'Click to save this setup as a project'. Below the search bar, a sidebar on the left lists various categories like 'Map Imagery', 'Near Real Time', and 'Keywords'. The main content area shows '1 Matching Collections' and a list of results. The first result is 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003'. A red arrow points to a minus sign icon in the bottom right corner of this result's card, with a yellow callout box stating 'Clicking the - symbol will remove this collection from your project.' To the right of the search results is a world map. A red arrow points to a user profile icon in the top right corner, with a yellow callout box stating 'Review contact information, recent orders, saved projects or Logout of your account'. The bottom of the page contains version information and NASA contact details.

Búsqueda y descarga de datos de SMAP:

Ahora se les va a mostrar cómo pueden usar Earthdata Search para encontrar, personalizar y descargar los archivos que visualizamos y descargamos en Worldview.

Voy a fijar filtros temporales y espaciales y agregar el SPL3SMP a un proyecto. De ahí, veremos cómo personalizar los datos antes de descargar.



Fijando el filtro de búsqueda temporal:

Estoy usando la opción de “Recurring?” para limitar los granulos (archivos) retornados a las fechas entre el 22 y el 25 de mayo de 2015 y 2016..

The screenshot displays the Earthdata Search interface. The search query is 'SPL3SMP'. The temporal filter is set to 'Recurring?' with a start date of '05-22 00:00:00' and an end date of '05-25 23:59:59'. The year range is set to '2015 - 2016'. The search results show '1 Matching Collection' for 'SMAP L2 Moisture' with '520 Granules'. The interface includes a sidebar with 'Browse Collections' and 'Features', a search bar, and a map of the United States and surrounding regions.

Fijando el filtro de búsqueda espacial:

Note que el conteo de gránulos ha bajado de 520 a 8 gránulos.

Ahora fijaré mi filtro de búsqueda especial sobre Colorado usando la opción rectángulo

The screenshot displays the NASA Earthdata Search interface. At the top, the search bar contains 'SPL3SMP'. Below the search bar, the 'Browse Collections' sidebar is visible on the left. The main content area shows '1 Matching Collections' for 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003'. A red arrow points to the '8 Granules' count. The right side of the interface features a map of North America with a rectangular search filter drawn over Colorado. A yellow callout box with a red arrow points to the temporal search details: 'Start 05-22 00:00:00 Stop 05-25 23:59:59 Range 2015 - 2016'. The map also shows a 'Click and drag to draw rectangle. (45.07031, -111.08375)' instruction. The bottom of the interface includes version information and NASA contact details.

Para agregar una colección a un proyecto:

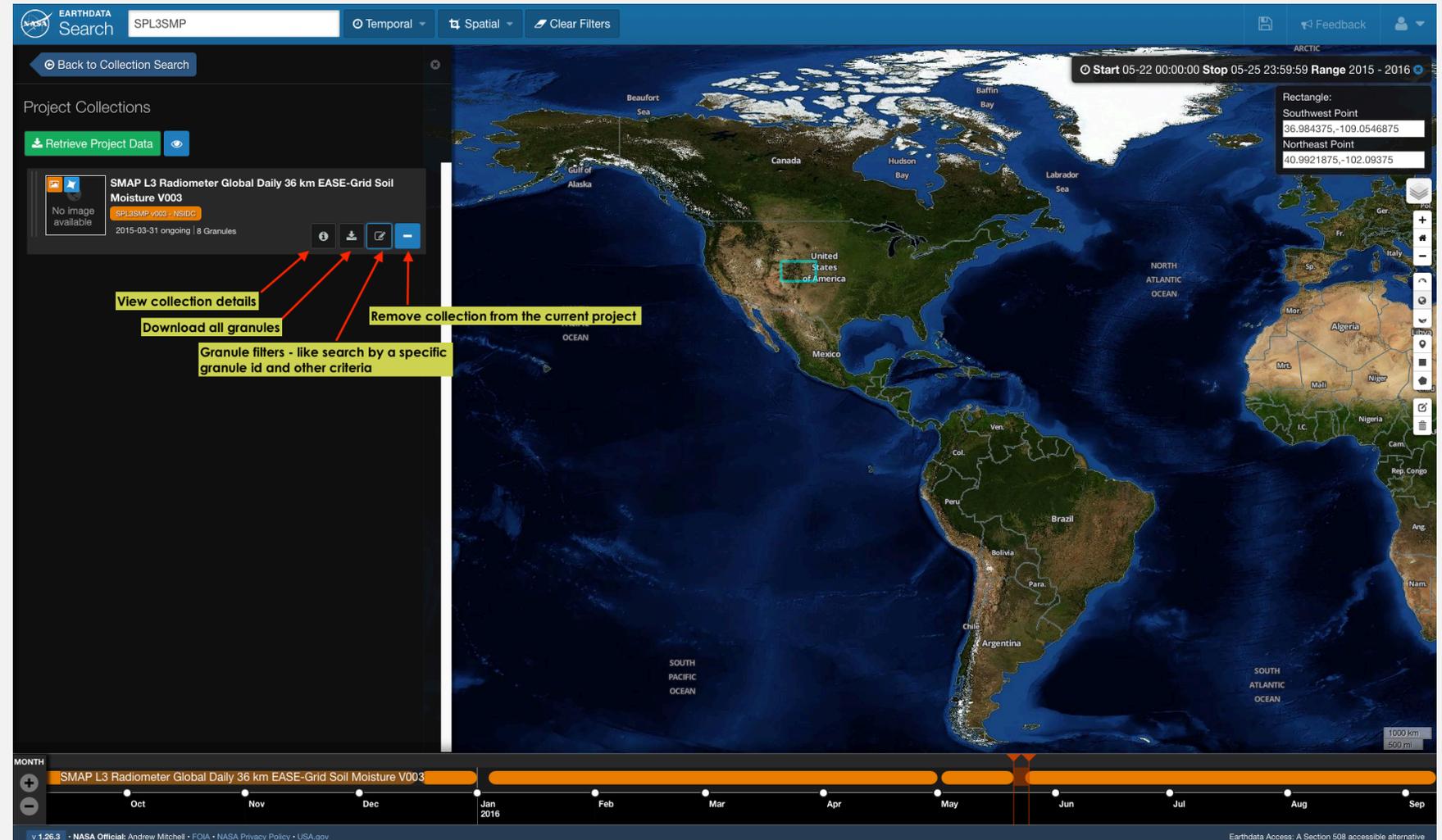
Con la búsqueda espacial configurada, las coordenadas aparecen junto con los detalles de los criterios de la búsqueda temporal.

Vamos a agregar mi colección al proyecto actual y visualizarla. Esto es opcional – Ud. no necesita usar la opción de proyectos para ordenar datos.

The screenshot displays the Earthdata Search interface. On the left, a sidebar lists various search criteria under 'Features', 'Keywords', 'Platforms', 'Instruments', and 'Organizations'. The main search results pane shows '1 Matching Collections' for the query 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003'. A red arrow points to a plus sign icon next to the collection details. On the right, a map of North America is shown with a cyan rectangular search area over the United States. A yellow callout box with a red arrow points to the search area, stating 'Now my spatial search coordinates are displayed as well'. A data table on the right side of the map shows the search coordinates: Southwest Point (36.984375, -109.0546875) and Northeast Point (40.9921875, -102.08375). The top of the interface includes the 'EARTHDATA Search' logo, a search bar containing 'SPL3SMP', and filters for 'Temporal' and 'Spatial'. The bottom of the interface shows the version 'v 1.28.3' and NASA contact information.

Expandir para revelar la lista de gránulos:

Cuando pulso en el texto que dice “8 Granules” la ventanilla cambia a una nueva visualización que muestra los 8 gránulos todos.



Gránulos listados:

Aquí puedo pulsar el ícono de descargar para descargar archivos individuales o el símbolo X para borrar un archivo de la lista. Voy a hacer esto último para dejar sólo los dos archivos que me interesan.

Note que pulsar el nombre de un gránulo visualiza la extensión del archivo en el mapa.

The screenshot shows the EarthData Search interface for the collection 'SMAP_L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003'. The search results list 8 granules, each with a file name and a date range. The first granule is highlighted, and red arrows point to the 'Remove from list' and 'Download individual file' buttons. The map shows the United States of America with a red box highlighting the file name 'SMAP_L3_SM_P_20160524_R13080_001.h5'. The interface includes a search bar, filters, and a timeline at the bottom.

Gránulos suprimidos y listos para personalizar y ordenar:

The screenshot displays the EarthData Search interface for the collection "SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003". The search results show two granules, with the first one selected. A yellow callout box with a red arrow points to the "Retrieve Collection Data" button and contains the text "Click to download all listed granules". The interface also features a world map with a red rectangle highlighting the search area, a timeline for the month of May 2016, and a color scale for soil moisture values ranging from 150.00 to 300.00 K. The bottom of the interface includes the NASA logo and contact information.

Opciones de descarga:

Data Access
Review and select service options for your data prior to download

1 SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003

Review & Select Service Options

Review

2 Granules

Granule List

Expand List

Service Options

Select Data Access Method: Download FTP order w/QA SPL3SMP:3 ESI Service

Add access method Access these granules again with different options

Submit

Choosing the "Download" option and clicking the "Submit" button will return a choice of FTP links which, when clicked, download the files to your machine, or a download script that can be run to automatically download the files to your computer.

Success!
Your request has been processed. See below for information on accessing your data.

The following collections are available for immediate download

Click the "View Download Links" button to view a page containing links to your data. You may bookmark this page for later access. A browser download manager plugin such as Firefox's [DownThemAll!](#) can assist you in managing a large number of download links.

- SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003
 - [View Download Links](#)
 - [Download Access Script](#)

Next Steps

- [Back to Earthdata Search Results](#)
- [Start a New Earthdata Search Session](#)

Data Access
Review and select service options for your data prior to download

1 SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003

Review & Select Service Options

Review

2 Granules

Granule List

Expand List

Service Options

Select Data Access Method: Download FTP order w/QA SPL3SMP:3 ESI Service

Media Options

Media Type:

Media Format:

Check here for Ancillary data options

Include associated Quality Assurance file in order?

Add access method Access these granules again with different options

Continue

Choosing the "FTP order w/QA" option lets you choose whether the files are "pushed" to you, or you "pull" the files from our server using a link that will be emailed to you when the order has completed.

Success!
Your request has been processed. See below for information on accessing your data.

The following collections are being processed

When the data becomes available, an email containing download links will be sent to the address you provided.

- SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003 Creating

Next Steps

- [Back to Earthdata Search Results](#)
- [Start a New Earthdata Search Session](#)

Data Access
Review and select service options for your data prior to download

1 SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003

Review & Select Service Options

Review

2 Granules

Granule List

Expand List

Service Options

Select Data Access Method: Download FTP order w/QA SPL3SMP:3 ESI Service

Email Address:

A valid email address is required.

Include Metadata and Processing History

Reformat Output (Optional)

Output File Format:

Spatial Subsetting (Optional)

Enter bounding box

Projection Options

Re-projection Options:

Band Subsetting (Optional)

Choosing the service option allows for customization: reformatting, spatial subsetting, reprojecting and parameter subsetting.

Personalización de mi descarga:

Service Options

Select Data Access Method: Download FTP order w/QA SPL3SMP.3 ESI Service

Email Address

Include Metadata and Processing History

Reformat Output (Optional)

Output File Format ←

Spatial Subsetting (Optional)

→ Enter bounding box

North

West **Spatial bounds populate with the coordinates used in your spatial search criteria**

East

South

Projection Options

Re-projection Options ←

Band Subsetting (Optional)

Choose Bands

- ✓ SPL3SMP
 - ✓ Soil_Moisture_Retrieval_Data
 - ✓ albedo
 - ✓ boresight_incidence
 - ✓ EASE_column_index
 - ✓ EASE_row_index
 - ✓ freeze_thaw_fraction
 - ✓ landcover_class
 - ✓ Bands[1]
 - ✓ Bands[2]
 - ✓ Bands[3]
 - ✓ landcover_class_fraction
 - ✓ Bands[1]
 - ✓ Bands[2]

Click here to deselect all options. Next, I'll choose just the parameters I want →

Personalización de mi descarga:

The screenshot displays the 'Band Subsetting (Optional)' interface. It features a tree view under the heading 'Choose Bands' with the following structure:

- SPL3SMP
 - Soil_Moisture_Retrieval_Data
 - albedo
 - boresight_incidence
 - EASE_column_index
 - EASE_row_index
 - freeze_thaw_fraction
 - landcover_class
 - Bands[1]
 - Bands[2]
 - Bands[3]
 - landcover_class_fraction
 - Bands[1]
 - Bands[2]
 - Bands[3]
 - latitude
 - latitude_centroid
 - longitude
 - longitude_centroid
 - radar_water_body_fraction
 - retrieval_qual_flag
 - roughness_coefficient
 - soil_moisture
 - soil_moisture_error
 - static_water_body_fraction
 - surface_flag
 - surface_temperature
 - tb_3_corrected
 - tb_4_corrected
 - tb_h_corrected
 - tb_qual_flag_3
 - tb_qual_flag_4
 - tb_qual_flag_h
 - tb_qual_flag_v
 - tb_time_seconds
 - tb_time_utc
 - tb_v_corrected
 - vegetation_opacity
 - vegetation_water_content

At the bottom of the interface, there are two options: 'Add access method' and 'Access these granules again with different options'. A 'Continue' button is located at the bottom right.

Sometiendo mi pedido de SMAP:

The screenshot shows the Earthdata Search interface. At the top left is the NASA Earthdata Search logo. At the top right are links for 'Feedback' and a user profile icon. Below the header is a 'Back to Search Session' link. The main content area is titled 'Data Access' with the subtitle 'Review and select service options for your data prior to download'. There are two numbered steps: '1 SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003' and '2 Contact Information & Submit'. Step 2 is active and contains a form with the following text: 'Amy FitzGerrell', 'Organization: NSIDC', 'Country: United States', 'Affiliation: EDUCATION', 'Study Area: Cryospheric Studies', and 'User Type: Data Provider Internal User'. Below the form is a button that says 'Edit Profile in Earthdata Login'. At the bottom right of the form area are 'Back' and 'Submit' buttons, with a red arrow pointing to the 'Submit' button. The footer contains version information 'v 1.26.3', NASA contact info, and a link to the Earthdata Access Section 508 accessible alternative.

Recuperando mi producto de SMAP:

Puedo pulsar el enlace html para visualizar los detalles del pedido (lo cual repasaré en seguida) o puedo pulsar el archivo zip para descargar todo a mi máquina de uno solo.

The screenshot shows the Earthdata Search interface with a 'Success!' message. The message states: 'Your request has been processed. See below for information on accessing your data.' Below this, it says 'The following collections are being processed' and 'When the data becomes available, an email containing download links will be sent to the address you provided.' A list item shows 'SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture V003' with a 'Complete' status. Below this, it says 'Your request is complete and can be downloaded using the following urls:' followed by two URLs: 'http://n5e1l01u.ecs.nsidc.org/ops/eslr/5000000009276.html' and 'http://n5e1l01u.ecs.nsidc.org/ops/eslr/5000000009276.zip'. A yellow callout box with a red arrow points to the 'Complete' status and the URLs, containing the text 'Request status - when complete, URLs are presented'. Below the message is a 'Next Steps' section with two links: 'Back to Earthdata Search Results' and 'Start a New Earthdata Search Session'. The footer of the page includes 'v 1.26.3', 'NASA Official: Andrew Mitchell', 'FOIA', 'NASA Privacy Policy', 'USA.gov', and 'Earthdata Access: A Section 508 accessible alternative'.

Recuperando mi producto de SMAP:

Note que cuando elija reformatear el producto como GeoTIFF, Ud. recibirá un tif por banda seleccionado por cada gránulo en su pedido. Descargaré las imágenes tif de la humedad del suelo.

Output files for request id: 500000009276

Click on the following link for a Request Summary:

[requestSummary.txt](#)

Retrieve list of files as a text listing (no html):

[500000009276.txt](#)

Download all files in a single Zip file:

[500000009276.zip](#)

Click on the following links for generated output files:

For Input Granule: 79189537

[SMAP_L3_SM_P_20150522_R13080_001_soil_moisture_3a69a061.tif](#) (<1 MB, SCIENCE, image/tiff)

[SMAP_L3_SM_P_20150522_R13080_001_vegetation_water_content_3a69a061.tif](#) (<1 MB, SCIENCE, image/tiff)

For Input Granule: 80748296

[SMAP_L3_SM_P_20160524_R13080_001_soil_moisture_d036ee4.tif](#) (<1 MB, SCIENCE, image/tiff)

[SMAP_L3_SM_P_20160524_R13080_001_vegetation_water_content_d036ee4.tif](#) (<1 MB, SCIENCE, image/tiff)

Note: Data transfer tools like wget or cURL can be used to retrieve all the data with one command using the above text listing as input. Or, simply paste any of the above output file URLs into your browser's location bar to download a file.

In a UNIX-like environment, use the following commands to download data to the current working directory:

Using wget

```
> wget -i <curl text file>
```

Using cURL

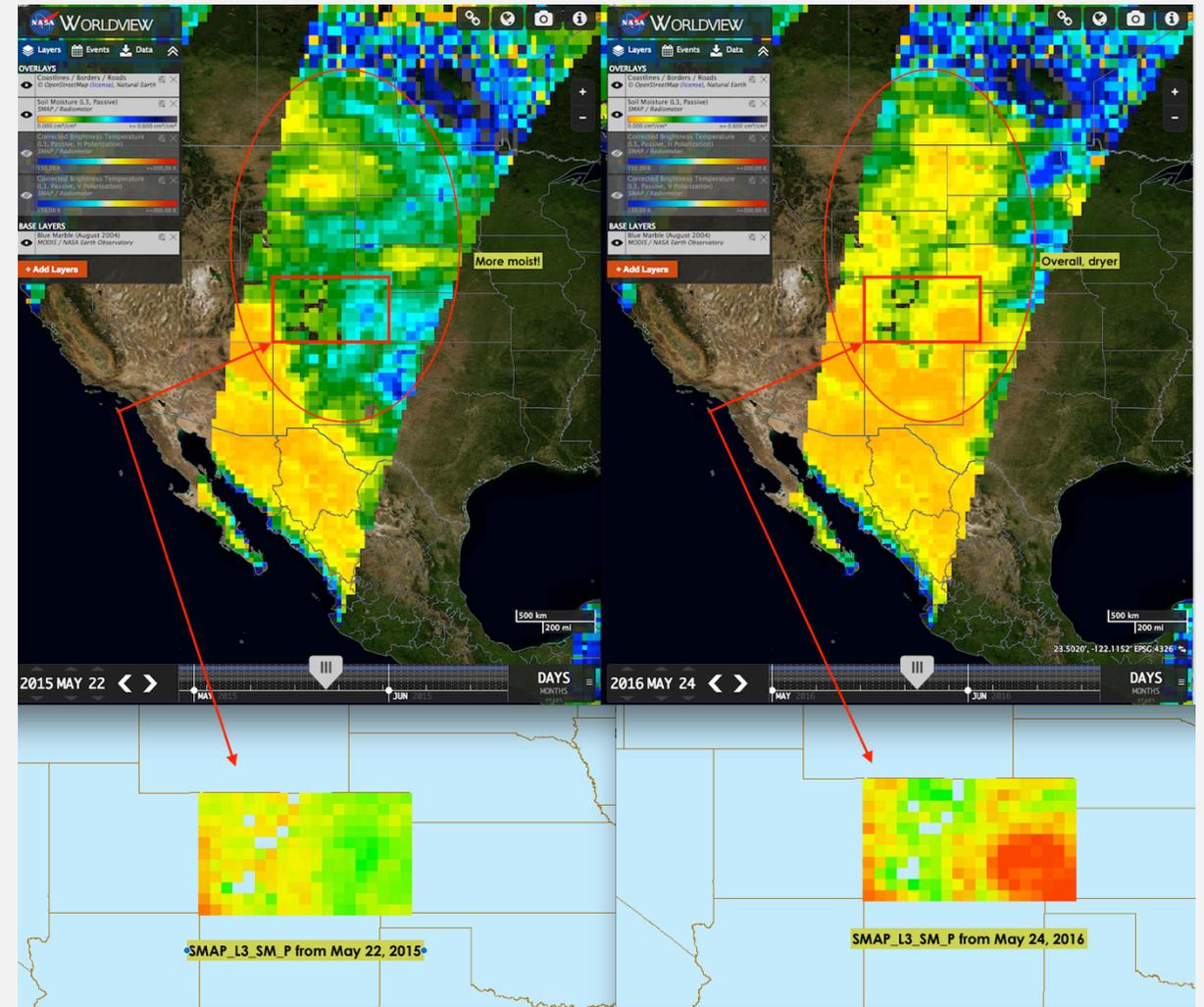
```
> for i in `cat <curl text file>`; do curl $i -OL -s; done
```

El producto final de SMAP – Comparado con Worldview:

Con los servicios de formación de subconjuntos que elegí, mis productos GeoTIFF de la humedad del suelo incluyen datos sólo para el estado de Colorado.

He modificado mis GeoTIFFs descargados de Earthdata Search en ArcMap un poco para aplicar una paleta de colores similar (pero no exacta) y los estoy mostrando aquí al lado de la visualización inicial de Worldview que armé.

Espero que esto haya sido útil y que disfruten de su exploración de las páginas en línea de NSIDC, Worldview y Earthdata Search!



Esto concluye la sesión de hoy – ¿Hay alguna pregunta?

En caso de tener preguntas en el futuro o si necesita ayuda, ¡nos complacemos en ayudarlo!
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